

Specifications

For other materials or modifications, please consult TESCO M.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

10,000, 15,000, 20,000 psig / 690, 1034, 1379 bar

Outlet Pressure

9000 to 20,000 psig / 621 to 1379 bar

8000 to 15,000 psig / 552 to 1034 bar

6000 to 15,000 psig / 414 to 1034 bar

4000 to 10,000 psig / 276 to 690 bar

2000 to 6000 psig / 138 to 414 bar

2000 to 4000 psig / 138 to 276 bar

1700 to 2500 psig / 117 to 172 bar

Design Proof Pressure

150% maximum rated

Leakage

2 drops/min. at 150 S.U.S and 2500 psig / 172 bar

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Flow Capacity

$C_v = 0.12$ (Control Regulator), $C_v = 1.9$ (Integrated Bypass)

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel, Nitronic 60 (20,000 psig / 1379 bar Inlet)

Seat, Main Valve, Vent

17-4 PH Stainless Steel, Polyimide (Vespe l®)

O-ring

Nitrile, Buna-N, FKM (Viton®-A), EP

Back-up Ring

PCTFE

Remaining Parts

316 Series Stainless Steel, 17-4 PH Stainless Steel, Nitronic 60

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (approximate)¹

50-4000: 15 lbs / 6.8 kg

50-4100: 20 lbs / 9.1 kg

50-4200: 20 lbs / 9.1 kg

¹ Air loaded versions will have an additional approx. 5 lbs / 2.3 kg to account for the actuator.

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TESCOM 50-4000, 50-4100 and 50-4200 Series pressure reducing regulators, with their integrated bypass valve, control high pressure water glycol. These unique regulators decrease pressurization time and lower maintenance costs.

Applications

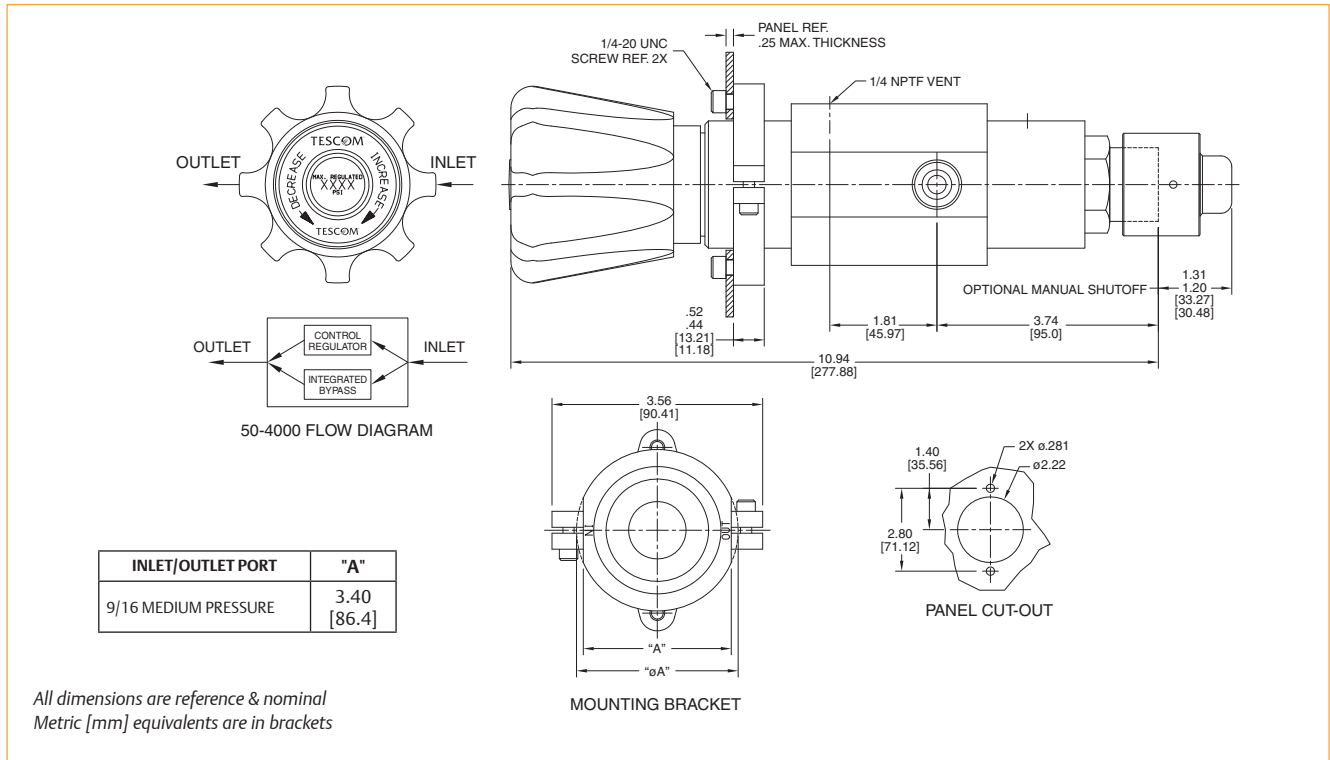
- Hydraulic Power Units (HPU)
- Wellhead control panels

Features and Benefits

- Unique integrated bypass valve simplifies the high pressure system design which results in fewer components and leak paths for added safety
- The addition of the 50-4000 Series to HPU units simplifies complex start up procedures while decreasing down time associated with filling long umbilicals
- Controls large variations in flow rates at pressures up to 20,000 psig / 1379 bar
- New stem and seal design extends regulator service life in crucial high pressure water-based hydraulic applications

50-4000 SERIES



50-4000 Series Regulator Drawing



50-4000 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

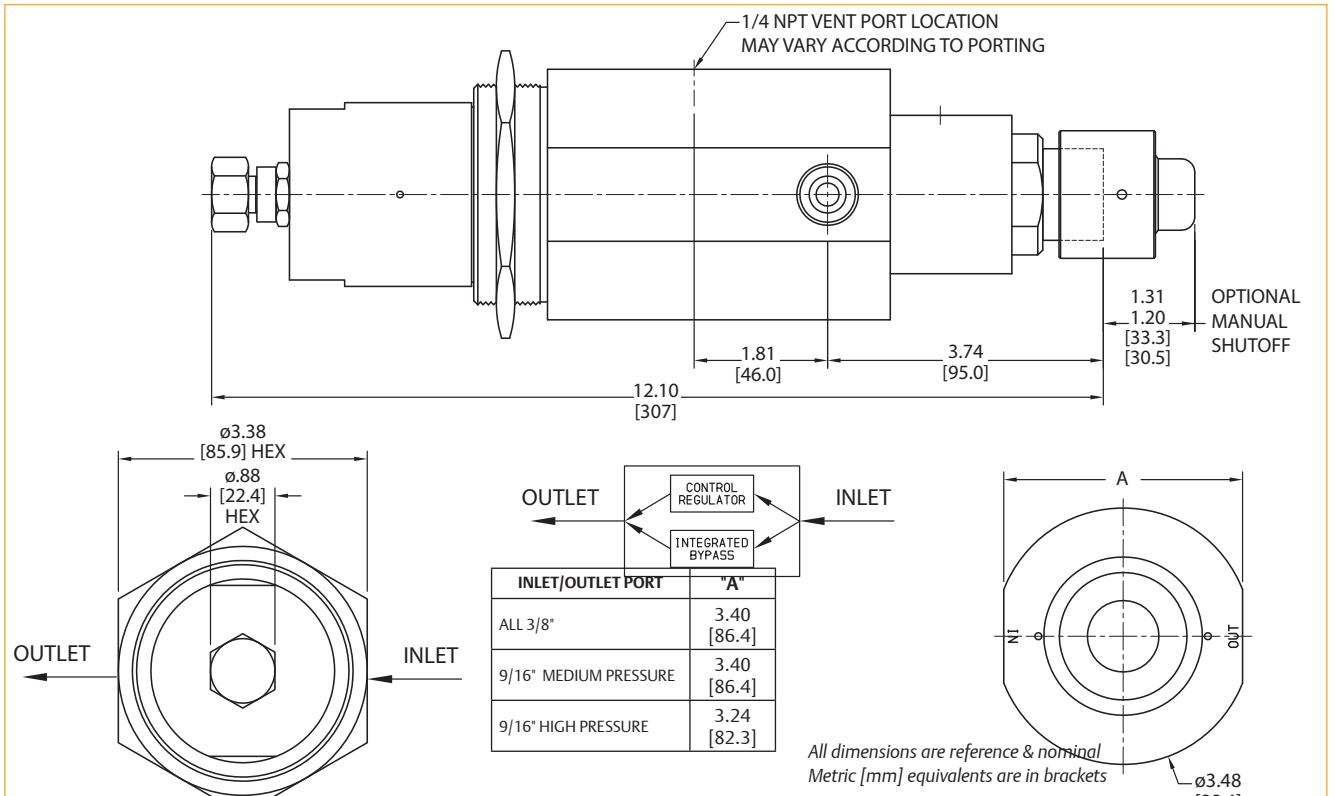
Example for selecting a part number:

50-40	9	1	D			6	9	S	3	5	0	A	
BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE		SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
		CONTROL REGULATOR	INTEGRATED BYPASS	DYNAMIC O-RINGS	STATIC O-RINGS	BACK-UP RINGS							
50-40	9 - 316 SST --- 15,000 psig 1034 bar (Medium/High Pressure) 10,000 psig 690 bar (NPTF & BSPP)	1 - 4000 to 10,000 psig 276 to 690 bar --- 0 to 3000 psig 0 to 207 bar 4 - 2000 to 6000 psig 138 to 414 bar ⁵ 5 - 2000 to 4000 psig 138 to 276 bar ⁵ 6 - 1700 to 2500 psig 117 to 172 bar ⁵	D - Nitrile, Buna-N T - FKM (Viton®-A) Z - EP	Nitrile, Buna-N FKM (Viton®-A) EP	PCTFE PCTFE PCTFE	0 - BSPP (1/4") 2 - NPTF (1/4") 4 - High Pressure (1/4" NPTF) 6 - Medium Pressure (1/4" NPTF)	6 - 3/8" ² 8 - 1/2" ³ 9 - 9/16" ⁴	S - Spring Load A - Air Load	3 - C _V = 0.12 (Control Regulator) C _V = 1.9 (Integrated Bypass)	5 - 17-4 Stainless Steel 7 - Polyimide (Vespel®)	0 - no gauge ports  1 - one outlet gauge port at 90° 	A - Included Blank - Not Included	

1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided
 2. Integrated Bypass C_V is limited to 1.0
 3. Not available in Medium Pressure and High Pressure
 4. Not available in NPTF and BSPP
 5. Integrated bypass pressure range:
 0 to 1000 psig at 10,000 psig inlet /
 0 to 69 bar at 689 bar or
 0 to 1600 psig at 15,000 psig inlet /
 0 to 110 bar at 1034 bar inlet.

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50-4100 Series Regulator Drawing



50-4100 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

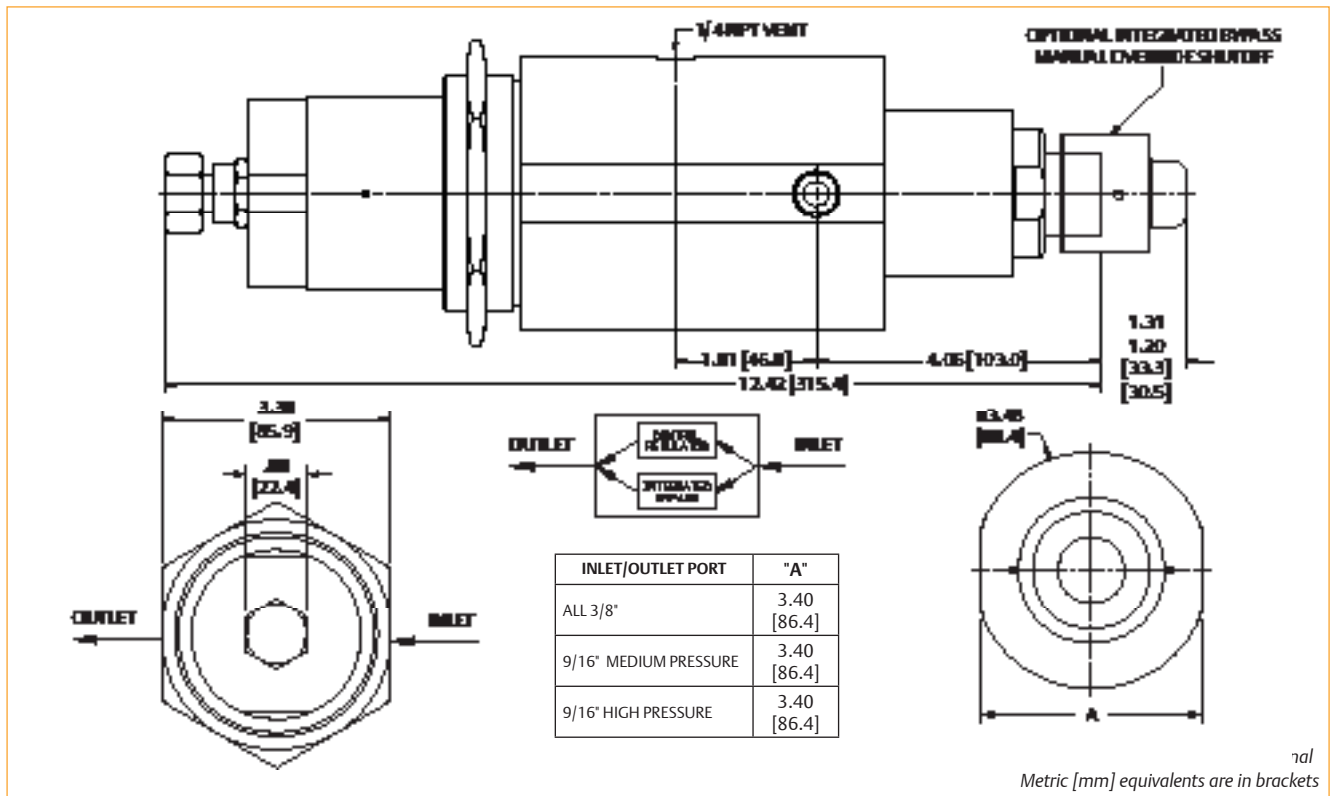
BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE --- CONTROL REGULATOR --- INTEGRATED BYPASS	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
50-41	9	0	D	6	9	S	3	5	0	A		
9 – 316 SST --- 15,000 psig 1034 bar	0 – 6000 to 15,000 psig 414 to 1034 bar --- 0 to 5200 psig 0 to 359 bar	D – Nitrile, Nitrile, PCTFE Buna-N, Buna-N, PCTFE T – FKM, FKM, PCTFE (Viton®-A), (Viton®-A) Z – EP, EP	4 – High Pressure (1/4" NPTF) 6 – Medium Pressure (1/4" NPTF)	6 – 3/8" 2 9 – 9/16"	S – Spring Load A – Air Load	3 – C _V = 0.12 (Control Regulator) C _V = 1.9 (Integrated Bypass)	5 – 17-4 Stainless Steel 7 – Polyimide (Vespel®)	0 – no gauge ports 1 – one outlet gauge port at 90°	A – Included Blank – Not Included			

1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided
2. Integrated Bypass C_V is limited to 1.0

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50-4200 SERIES

50-4200 Series Regulator Drawing



50-4200 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE --- CONTROL REGULATOR --- INTEGRATED BYPASS	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
50-42	N	0	D	6	9	S	3	5	0	A		
	N – Nitronic® 60 --- 20,000 psig 1379 bar	0 – 8000 to 15,000 psig 552 to 1034 bar --- 0 to 7000 psig 0 to 483 bar 1 – 9000 to 20,000 psig ³ 621 to 1379 bar ³ --- 0 to 8000 psig 0 to 552 bar	D – Nitrile, Buna-N T – FKM (Viton®-A)	Nitrile, Buna-N FKM (Viton®-A)	PCTFE PCTFE	4 – High Pressure (1/4" NPTF) 6 – Medium Pressure (1/4" NPTF)	6 – 3/8" ² 9 – 9/16"	S – Spring Load A – Air Load	3 – C _v = 0.12 (Control Regulator) C _v = 1.9 (Integrated Bypass)	5 – 17-4 SST	0 – no gauge ports 1 – one outlet gauge port at 90°	A – Included Blank – Not Included
<p>1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided</p> <p>2. Integrated Bypass C_v is limited to 1.0</p> <p>3. Outlet pressure only available with air loader option</p>												

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